officers and health services workers who inform patients of their rights.

Public interest attorneys for the plaintiffs retained a continuing duty to monitor and enforce the implementation of the stipulated judgment. To assist in this undertaking. the county was to prepare and maintain statistical records and reports for 3 years on (a) the number subjected to orders of isolation with socioeconomic data, (b) reasons for the duration of and termination of confinements, (c) the number treated by community workers, (d) the number housed in secure medical facilities, (e) the number referred to prosecution for violations of confinement orders, and (f) the number in the tuberculosis registry lost to supervision. In addition, the department of health services was to prepare semiannual summaries of all orders of isolation and all prosecutions for violations of such orders. If the above data were insufficient, any party could petition the court to inspect other material, such as the original orders or transcripts of hearings.

It was agreed that if during the 3 years after the stipulated judgment the number of prosecutions for violating Section 3285 detention orders in any 6-month period exceeded 15 percent of the orders, or more than 5 orders, then counsel for plaintiffs would have the right to demand, within 60 days, access to a licensed medical facility for secure confinement to reduce the necessity for criminal prosecutions and incarcerations. Similarly, if the percentage of tuberculosis patients lost to supervision were to exceed 20 percent of those in tuberculosis registry, then any party to the suit could demand secure confinements in licensed facilities for patients under Section 3285 orders. Otherwise, defendants were obligated to confine patients under the least restrictive conditions available, but consistent with the need for involuntary detention.

The remainder of the order pertained to assessments of and improvements to be made in treatment opportunities for the difficult-to-treat TB patient population, such as continuation of a program of outreach workers in clinics who were providing individual therapy to reduce the necessity of confinements. The assessment of this program was to include participation by counsel for all the parties to the agreement. The county and the director of tuberculosis control also agreed to study the feasibility of establishing a TB diagnostic and treatment clinic for homeless and transients in the downtown skidrow area. If appropriate, such a clinic was to be quickly established.

Finally, should disputes arise about application of the stipulated judgment and injunction, the parties agreed to attempt resolution by themselves before seeking judicial solutions.

—SUSAN GREENE MEREWITZ, Senior Attorney, Public Health Division, Office of the General Counsel, Department of Health and Human Services.

# **Tuberculosis Screening** in Boston's Homeless Shelters

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Director of Community Health Services, Boston Department of Health and Hospitals.

A number of persons provided substantial help to the project described in this paper. Sue Weidhaas, RN, MS, and Barbara Thomas, RN, Massachusetts Department of Public Health, Tuberculosis Control Program, assisted in organizing the screening program. Doris Johnson, SM (AAM), MEd, Massachusetts Department of Public Health, Mycobacteriology Laboratory, performed mycobacterial cultures. Barbara Blakeney, RN, and Bob Richards, MSW, Health Care for the Homeless Project, and Barbara McInnis, RN, Pine Street Inn, served as liaison with participating shelters. Wilbur D. Jones, Jr., PhD, Mycobacteriology Branch, Centers for Infectious Diseases, Centers for Disease Control, performed phage typing.

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### Synopsis.....

From February 1984, through March 1985, a total of 26 cases of tuberculosis (TB) were verified in homeless persons in Boston.

Fifteen cases were resistant to isoniazid (INH) and streptomycin (SM) and were most likely the result of a common source exposure to one or

possibly two highly infectious persons. Five cases without multiple drug resistant organisms occurred in persons with previous positive tuberculin tests who had not received adequate therapy for prophylaxis of infection or treatment of disease. The remaining cases were in persons with a previous negative skin test or no history of ever receiving a skin test.

A screening program using chest roentgenograms (CXR), skin tests, and sputum smears led to the identification of several cases. CXR, the most readily accepted test, was the mechanism by which all cases detected through screening were identified. Detection and therapy of TB in the homeless, a group at particular risk for disease, required intensive intervention and outreach efforts.

Rates of tuberculosis (TB) have been declining in the United States for the past several years.

In 1984, the rate was 9.4 cases per 100,000 population, a decline of 7.8 percent compared with 1983 (1). Because of decreasing case rates, screening programs for the general population are no longer recommended. However, certain groups, felt to be at particular risk, are candidates for screening, including refugees from countries where TB is endemic, and nursing home residents (2, 3). An additional high-risk group appears to be the homeless.

Estimates on the size of the homeless population in the United States vary from 250,000 to 3 million, and in the Boston area, the estimate is from 6,000 to 10,000 (4). A 1983 survey by the United Community Planning Corporation identified 1,032 people being sheltered in the Boston area on a single night. This number did not include persons who were turned away from existing facilities because of space limitations or those truly living on the street (5). Demographic information on shelter guests, available from the survey, indicated that they were overwhelmingly male (82 percent); of these, 28 percent were between 25 and 34 years old, 23 percent between 35 and 44, and 34 percent between 45 and 64. A majority of men (51 percent) were considered to have alcoholism, and a majority of women (59 percent) to have psychological problems as assessed by the shelter staff.

Despite potential difficulties in defining the extent of the problem, occurrence of TB in the homeless is not surprising. Factors that may contribute to disease, such as malnutrition, stress, and overcrowding, are common among these individuals (6). This report focuses on TB cases occurring among homeless persons in Boston during a 13-month period in 1984 and 1985. A majority appeared to be the result of exposure to one or two highly infectious cases, but several had a recurrence of a previous infection that had been

inadequately treated. In addition to case descriptions, the results of an intensive, 4-night screening program in November 1984 using chest roentgenograms (CXR), sputum smears, and skin tests are described.

#### **Cases**

In the summer of 1984, it was noted that an increased number of TB case reports were originating from a large shelter in Boston. The facility has 350 beds, but may house as many as 600 people in cold weather, with the overflow sleeping on the lobby floor. Two other large shelters, one with 115 beds and the other with 100 beds, have the same type populations as the large shelter. Some persons migrate between shelters from night to night.

TB case finding occurred through existing referral networks between the health department and nurses in the shelters and by the implementation of an intensive screening program in November 1984. A person was considered to be homeless if he was known to shelter staff, was staying in a shelter on the nights of the screening program, or gave the address of a shelter as a permanent address. Cases were verified on the basis of a positive culture for Mycobacterium tuberculosis, or on standard clinical criteria, or both (7). Cultures and drug susceptibility evaluations using the proportion method were performed by the State Laboratory Institute, Massachussetts Department of Public Health.

From February 1984 through March 1985, a total of 26 cases of TB were verified among the homeless, 24 on the basis of positive culture, and two using clinical criteria (see chart). Fifteen patients had isolates that were resistant to INH and SM, seven were susceptible to all drugs tested, one was resistant to low concentration—0.2 micrograms per milliliter (mcg-ml) INH alone—and one was resistant only to ethambutol (EMB). All cases occurred in men; their ages ranged from 24 to 69 years with a mean of 43.5 (table 1). Seventeen (65 percent) were white; six (23 percent) were black,

Table 1. Medical and demographic characteristics of homeless persons with tuberculosis: multiply drug resistant cases compared to nonresistant cases

Characteristics	Multiply drug resistant $(N = 15)$		Nonmultiply drug resistant $(N = 9)^{1}$		$Total (N = 26)^2$	
	Number	Percent	Number	Percent	Number	Percent
Mean age (years)		41.6		44.3		43.5
Race:						
White	10	<sup>3</sup> 67	5	56	17	65
Black	4	27	2	22	6	23
American Indian	1	7	2	22	3	12
Sex: male	15	100	9	100	26	100
Connection with large shelter	15	100	4	444	21	81
Prior skin test:						
Positive	2	13	5	56	8	31
Negative	5	34	1	11	7	27
Unknown	8	53	3	34	11	42
Site of disease:						
Pulmonary	12	80	7	78	20	77
Pulmonary, pleural	1	7	1	11	2	8
Pleural alone	2	13			2	8
Pulmonary, peritoneal			1	11	1	4
Meningeal					1	4
Cavitary disease:						
Present	5	33	1	11	6	23
Absent	9	60	8	89	19	73
Unknown	1	7			1	4
Sputum smear:	·	·			•	·
Positive	- 11	73	6	67	17	65
Negative	4	27	3	33	9	35

<sup>&</sup>lt;sup>1</sup>Includes isolates from 7 patients sensitive to all drugs tested, from 1 resistant to INH at 0.2 mcg/ml and from 1 resistant to ethambutol (EMB).

Reported tuberculosis cases among homeless persons, by month of report, Boston, MA, 1984-85

<sup>3</sup>Numbers may not equal 100 percent because of rounding error.

 $^4P = 0.003$  by Fisher's exact test.

persons, 21 (81 percent) had some connection with	Cases	
he large shelter, including all 15 cases with an NH and SM resistant strain.	6 Bacteriologically negative	
	Susceptible to all drugs	
Both of the men who were suspected sources of	5 /// Other resistance	
he resistant strains were frequent guests at the	XX INH-SM resistant	
arge shelter. The first, a 33-year-old man with a	4	
nistory of alcohol abuse, had an 18 mm. reaction	3	
o a 5 TU Mantoux skin test in 1973, but he had		
ompleted only 2 months of preventive therapy	2	
with INH. Upon presentation in December 1983,		
ne had bilateral cavitary disease on CXR, mark-		
dly positive sputum smears, and a culture that		
vas resistant to INH and SM. The second sus-	Jan Feb Mar Apr May Jun Jul Aug Sep Oct	Nov Dec Jan Feb Mar
	1984	1985
sected source, a 54-year-old man with schizophre-		ARTHURSON WARE
nia, had a history of TB that in 1980 had been	Month	

and three (12 percent) were American Indian. Although different shelters were used by these th IN

th la hi to CC w h ec w p treated with multiple drugs including INH, SM, EMB, pyrazinamide (PZA), and rifampin (RIF). He received 16 months of supervised therapy using an approved regimen with clinical and radiographic improvement. In July 1984, he presented after several months of symptoms for which he refused medical evaluation. At that time, his CXR revealed a new infiltrate, a sputum smear con-

tained many acid-fast bacilli, and culture showed an organism resistant to INH and SM.

Pulmonary tuberculosis alone was seen in 20 cases; one person had meningeal TB, one had pulmonary and peritoneal involvement, two had pulmonary and pleural disease, and two had pleural involvement alone (table 1). Sputum

<sup>&</sup>lt;sup>2</sup>Includes 2 men with culture negative cases diagnosed by clinical criteria.

Table 2. Drug susceptibility patterns of isolates in persons with a prior significant skin test

Case No.	Age (years)	Date of prior tuberculin test	Prior tuberculosis classification	Prior drug	Therapy duration (months)	Resistance of current isolate
<sup>1</sup> 1	33	1973	Infection, no disease	INH	2	INH, SM
2	30	1982	Infection, no disease			INH <sup>2</sup>
3	40	1981	Tuberculosis	INH, EMB, RIF	3	none
4	54	1980	Tuberculosis	INH, SM, PZA, RIF, EMB	16	INH, SM
5	35	1970	Infection, no disease	INH	6	none
6	31	1979	Infection, no disease	INH	2	none
7	56	1980	Infection, no disease			none
8	53	1969	Tuberculosis	INH, SM, PAS	15	(3)

<sup>&</sup>lt;sup>1</sup>Suspected index case of INH and SM resistant organism.
<sup>2</sup>Resistant to INH 0.2 mcg/ml; susceptible to INH 1 mcg/ml.

smears, done in all 26 cases, were positive in 17 (65 percent). Cases with a multiply resistant organism were no more likely than those with a susceptible organism to have had a positive smear. Radiographic studies revealed cavitary disease in 5 of the 15 cases (33 percent) with a multiply resistant isolate, and in 1 of the 9 cases (11 percent) without a multiply resistant isolate; this difference was not statistically significant.

Prior skin test results, available in 15 of the 26 cases, indicated that 8 had been positive (table 2). Three of the eight persons with significant Mantoux tests, including the 54-year-old suspected source of the resistant organism, had received previous therapy for pulmonary TB. The other two included a 53-year-old treated for 15 months with INH, SM and para-aminosalicylic acid (PAS), and a 40-year-old treated for 3 months with INH, EMB, and RIF before being lost to followup. The 53-year-old was diagnosed in the current series on a clinical basis, and no culture was available for an evaluation of drug resistance. However, an isolate from the 40-year-old man was susceptible to all agents tested. The remaining five people with a previous significant skin test had had infection without disease. Most had had prophylactic therapy recommended, but none had completed an adequate course. Sputum cultures obtained from patients during the current outbreak revealed one patient resistant to INH and SM, three susceptible to all drugs, and one resistant to low concentrations (0.2 mcg per ml) of INH.

During the 13-month period from February 1984 through March 1985, 21 patients with isolates resistant to INH and SM were reported in Massachusetts; of these 15 (71 percent) occurred in Boston's homeless. Phage typing of isolates was done by the Mycobacteriology Branch, Division of

Bacterial Disease, CDC, by methods previously described (8,9). Thirteen of 15 INH- and SM-resistant cultures from the homeless were available for phage typing, and all were type 8 (7,9,10-13), including an isolate from the 54-year-old suspected source. Three of the remaining six INH- and SM-resistant organisms, including one from the other suspected source, were not available for typing; two were phage type 2 and one was phage type 8.

Of 26 verified cases among the homeless, two men died of causes unrelated to TB, and one moved out of State.

Most persons were treated on an outpatient basis, including 15 who took medication while observed by a health care provider. Treatment was facilitated by use of a periodically updated list of persons on medications and the dispensing of antituberculosis medications by nurses at participating shelters. The list contained current medications and dosages for each person as well as the date of his last and next scheduled clinic visits. In addition, a public health nurse was assigned to each person to encourage compliance. To date, of the 23 persons with the remaining cases being followed, 7 have completed therapy, and none has been lost to followup. Although drug regimens varied, at least two first-line antituberculosis drugs were included in each. RIF and EMB used alone or in combination with other drugs were frequently prescribed for persons with INH- and SM-resistant organisms. An 18- to 24-month course of treatment is anticipated for those with resistant disease.

#### Screening

The large number of cases, the multiple drug resistance of many patients, and the mobility of

<sup>&</sup>lt;sup>3</sup>Case diagnosed clinically; no isolate available for susceptibility testing.

the homeless population prompted the development of a plan to perform TB screening simultaneously in the three largest shelters in Boston. During a four-night period in late November 1984, guests who agreed to participate were questioned to get medical and demographic data, including a history of symptoms of TB and previous tuberculin status. All persons were requested to undergo a CXR (available at each site) and a skin test. Beginning on the third screening night, all guests had both arms checked for a potentially readable skin test. A sputum specimen was obtained from symptomatic persons. Radiographs and sputum specimens were processed immediately so that persons with abnormal results could be referred to a designated medical or TB clinic before they left the shelter.

A computer line listing of all data was generated and distributed to participating shelters before screening on each successive evening to avoid unnecessary repetition of tests. Incentives such as food vouchers and lottery tickets reported to be beneficial in other screening efforts were not utilized (10). Instead, shelter staff members familiar with the population and public health nurses were relied on heavily to obtain cooperation (11).

Of approximately 750 people in participating shelters on the screening nights, 586 took part in the program. Forty-three percent of participants underwent only one screening test, 36 percent two tests, and 21 percent three tests. Most persons screened (88 percent) were male; 63 percent were between the ages of 20 and 49 (table 3). A CXR was obtained for 465 guests (79 percent of participants); 24 films were suspicious for TB. Several persons were started on medication, but TB was confirmed in only three. However, a fourth case was detected by CXR done as part of a prescreening effort in one of the participating shelters several nights before the actual program.

Skin tests were administered to 362 people (62 percent of persons screened), but only 187 test recipients could be located 2 days later for reading. Induration greater than or equal to 10 millimeters was found in 42 of the 187 (22 percent), and they included three recent converters. Of this group, 38 received a CXR, and 23 at least one sputum evaluation. None of this group was found to have pulmonary tuberculosis. However, three people with a significant skin test had no further evaluation. Because of potential difficulties with followup, preventive therapy was not offered to most of these people at the time of the screening.

Table 3. Results of a four-night screening program among 586 homeless persons in Boston

Variable	Number	Percent 1
Sex:		
Male	518	88
Female	68	12
Age (years):		
19 or younger	2	<sup>2</sup> 1
20–29	97	17
30–39	161	27
40–49	113	19
50–59	99	17
60–69	56	10
70 or older	21	4
Unknown	37	6
Skin tests placed:	362	62
Skin test results (mm induration):		
0	107	<sup>3</sup> 30
1–9	6	2
10–14	10	3
15–19	15	4
20 or more	17	5
"Negative"	32	9
Never read	175	48
CXR: total	465	79
Abnormal other than TB <sup>5</sup>	68	<sup>3</sup> 15
Suspicious for TB	24	5
Sputum specimens: total	217	37
Smear positive	<sup>6</sup> 1	1
Culture positive	2	1
Yes	115	20
No	206	35
No response	265	45

<sup>1</sup>Percent calculated based on total number of screenees unless otherwise noted.

<sup>2</sup>Numbers may not add up to 100 percent due to rounding error.

<sup>3</sup>Percent calculated using as denominator the number of subjects receiving the test.

<sup>4</sup>Skin rest < 10mm, but exact mm reading not recorded.

5Includes COPD, lung cancer.

<sup>6</sup>This specimen was culture negative.

<sup>7</sup>Symptoms included fever, chills, sweats, cough, weight loss. A screenee with a positive response to any symptom is reported as being symptomatic.

Sputum specimens obtained from 217 people revealed only one person with a positive smear. This specimen was from a man with no TB history and an abnormal CXR. He was started on a multiple drug regimen, but this was discontinued when cultures were negative and no clinical response to anti-tuberculosis therapy was observed. Specimens from two other people were culture positive; both were resistant to INH and SM.

A total of 321 persons (55 percent of program participants) responded to questions about symptoms of TB, including fever, chills, sweats, cough, malaise, and weight loss. Of the 68 persons with an abnormal CXR, 55 gave information about symptoms; 24 had at least one symptom, and 31

Table 4. Symptoms and chest X-ray results in a screening program of homeless persons in Boston

Symptoms	Abnormal	Normal	Total	
Yes	24	76	100	
No	31	157	188	
Total	55	233	288	

NOTE:  $X^2$  (1 df) = 2.383, N.S.

did not (table 4). This was not a statistically significant difference; thus the self-reporting of symptoms as used in the screening appeared to have little positive predictive value for an abnormal CXR. However, two persons detected through screening did not report symptoms, and the third did not respond to the questions.

Cost of the screening program, including supplies, clerical and technical personnel, and nursing staff was \$7,526. Despite a large contribution of volunteer time, which kept screening costs at a minimum, the cost of detection per case was \$2,509. However, the role of the program in detecting future cases through an increased awareness of TB cannot be quantified.

Continued TB surveillance after the four-night screening program emphasizes the need for rapid referral of suspected cases by shelter personnel. In addition, TB screening of shelter staff members is being encouraged. At the large shelter, 17 of 85 staff members have had documented skin test conversions. Three of 15 and 3 of 18 staff members at the other two shelters have also had documented conversions. A regimen of preventive therapy containing RIF is being suggested for these people because of the potential for infection with an INH-resistant organism (14,15).

#### Discussion

Although TB has been associated with malnutrition, overcrowding, and stress, little data are available on the prevalence of TB in the homeless, a group in whom these conditions are common. Our report of 26 incident cases over a 13-month period emphasizes the potential for disease in this high-risk group. Data from an ongoing New York study revealed similar findings over 22 months; 26 of 307 (8.5 percent) evaluated in one shelter had current TB (12). Furthermore, disease in this population is associated with a significantly elevated mortality rate. Data on 6,032 homeless men in Sweden revealed a mortality rate from TB six times that expected in the general population (13).

Diagnosis of TB in this setting is particularly difficult because of the mobile nature of the population. Chest radiographs of 2,020 homeless people in New Orleans identified 7.7 percent suspicious for TB, but adequate evaluation was not possible for most cases (16). In our program, all persons with suspicious chest films were located and further evaluated. However, even with systematic efforts to evaluate individuals in several heavily frequented sites simultaneously during the screening program, only 52 percent of skin tests could be read because of problems with followup.

The highly drug-resistant nature of the organism in 15 of 26 cases suggests a common source exposure; phage typing, performed on 21 of 24 isolates from the homeless, offered supporting data. Fifteen were phage type 8 (7,9,10-13), including 13 isolates resistant to INH and SM, 1 susceptible to all drugs, and 1 resistant to EMB only. By comparison only 1 of 13 control cultures submitted from nonhomeless persons in the Boston area was type 8 (7,9,10-13). This isolate, obtained from an individual who denied any affiliation with the homeless community, was also resistant to INH and SM.

Whether the 11 nonmultiply drug-resistant cases represent an increase in nonoutbreak-associated TB in the homeless is unclear. In the 3 years preceding the current episode, the large shelter had reported an average of 3 cases per year. Possible explanations for a greater number of cases include an increase in the size of the population at risk, improved surveillance (particularly after an outbreak was suspected), changes in the population such as deteriorating nutritional status, or changes in the environment such as increased crowding. Data are not available to support or refute these hypotheses.

Compliance with antituberculosis therapy is difficult for the 26 persons with the disease. Factors known to effect compliance include an individual's belief in the seriousness of his illness, his perception of the benefits of treatment, and barriers to recommend health actions (17). In a group with daily concerns of a more basic and immediate nature such as food and shelter, these issues are understandably more complicated. The availability of medication and information on patients' doses to nurses at the frequently used shelters has been an important step in increasing compliance. Nurses are also given information on scheduled clinic appointments, allowing shelter staff members to reinforce the importance of continued medical care. In fact, the supportive role customarily

furnished by family or friends is provided to a large extent by staff members at the shelter. Use of a former homeless person to act as a liaison has been suggested as an alternative, but that idea has not been tried in our program (12).

In many cases, the cooperation of shelter staff members and use of directly observed therapy has allowed patients to avoid hospitalization for TB therapy. In Massachusetts, the average cost of hospitalization for a homeless person who requires inpatient TB therapy is \$26,709, according to Sue Weidhaas, RN, MS, director of the Massachusetts Department of Public Health Tuberculosis Control Program. By comparison, cost for directly observed outpatient therapy, including personnel, medication, laboratory, and radiological charges, averaged \$3,063 per patient. Consequently, the use of outpatient therapy resulted in significant savings.

Of the tests used in screening, CXR was the most readily accepted and was the mechanism by which all cases detected through screening were identified. CXR screening was facilitated by the availability of an X-ray machine in one shelter and on the grounds of two others. Cost, logistics, and difficulty in interpreting films in those with previously abnormal findings were its major limitations. Skin testing was refused by many, several of whom refused "needles."

Furthermore, many who agreed to skin test placement could not be located for reading. Even in those with a readable test, results had to be interpreted with caution. In persons with a positive test, duration of infection was often unknown because of inadequate prior test history. Because of poor nutritional status, some infected persons may have had negative skin tests. No case was identified from sputum smears.

A majority of the 23 cases detected outside the intensive screening effort were symptomatic. However, symptoms elicited during the screening itself had little positive predictive value. Questions other than those used may have been more revealing, but conditions such as acute and chronic bronchitis, that may produce symptoms similar to TB, appear to be prevalent in this group, and these may confound responses.

Cooperation with the testing program was excellent, almost certainly due to support of the program by shelter staff members familiar to the guests and to intensive nursing intervention. Because shelter personnel play such a key role in both screening and therapy, education of this group is a high priority. Currently, each shelter in

'In Massachusetts, the average cost of hospitalization for a homeless person who requires inpatient TB therapy is \$26,709... By comparison, cost for directly observed outpatient therapy, including personnel, medication, laboratory, and radiological charges, averaged \$3,063 per patient.'

Boston is assigned a TB nurse to act as a source of information and referral and to provide educational programs. This outreach emphasizes rapid referral of suspected cases by the shelter staff.

Shelter employees also appear to be at increased risk for TB and should have periodic skin test evaluations. In the current outbreak, 23 of 118 staff tested had a documented recent conversion. Because of the INH-resistant nature of many cases among the homeless in the outbreak, a prophylactic regimen containing RIF was recommended. Although the efficacy of RIF used in preventive therapy has not been demonstrated, many TB experts support its use (14,15).

TB is only one of many health problems faced by homeless persons; adequate care of persons with TB and other diseases will require a coordinated effort. In Boston, this concept has recently been implemented by health care teams of physicians, nurses, and social workers who provide primary care to the homeless within the shelters. Such an approach may obviate the need for intensive screening and allow for prophylaxis and therapy to be delivered on a routine basis.

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## Role of Nurses in Meeting Needs of the Homeless: Summary of a Workshop for Providers, Researchers, and Educators

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Loretta Haggard, BA, Consultant to NIMH, assisted in preparing this summary, and Natalie Reatig, BA, Special

Assistant to the Director of the Division of Education and Service Systems Liaison, NIMH, helped design and plan the meeting. Other important workshop planners included Alvira Brands, DNSc, Assistant Branch Chief, State Planning and Human Resource Development Branch, NIMH; Patricia A. Deiman, RN, MNA, MPH, Nurse Consultant, Health Resources and Services Administration (HRSA); Juanita Evans, MSW, Chief, Social Work, Division of Maternal and Child Health, Bureau of Health Care Delivery and Assistance, HRSA; Shallie Marshall, RN, MSM, MPH, Nurse Consultant, Refugee Mental Health Program, NIMH; Ruth Kay, BS, Technical Writer, Office of Scientific Communication, NIMH; Janet M. Fox, BA, Deputy Staff Director, Department of Health and Human Services Task Force on the Homeless; Barbara Lubran, MPH, Program Analyst, Planning and Financial Management Branch, National Institute on Alcohol Abuse and Alcoholism; and Jacqueline Parrish, RN, MS, Program Director, Community Support Program NIMH.

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 $\Gamma$  wenty-two pioneers in work with the homeless-registered nurses, clinicians, nursing administrators, faculty members, and researchersparticipated in a workshop to discuss their nursing practice with homeless persons. Funded jointly by the Office of the Assistant Secretary for Health and the National Institute of Mental Health (NIMH), the workshop addressed "The Role of Nurses in Meeting the Health/Mental Health Needs of the Homeless." The American Public Health Association (APHA) sponsored the workshop and convened it at its national headquarters in Washington, DC, on March 6 and 7, 1986. This paper summarizes a more detailed account of the proceedings that was prepared by the APHA (see box).

The meeting focused on the nursing profession because nurses frequently must provide "handson" services to vulnerable homeless persons who may require crisis intervention, stabilization, treatment, or followup care.

Jean Craft-Taylor, RN, MBA, Chief of Staff of the Department of Health and Human Services (HHS), commented during her opening remarks that "... there are approximately 2 million licensed RNs in this country. Without question we are the largest force in any sphere of human services." Clearly nurses have a crucial part to play in reaching out to the homeless.

Deputy Surgeon General Dr. Faye Abdellah challenged the workshop participants to attain four specific goals: (a) to identify issues affecting